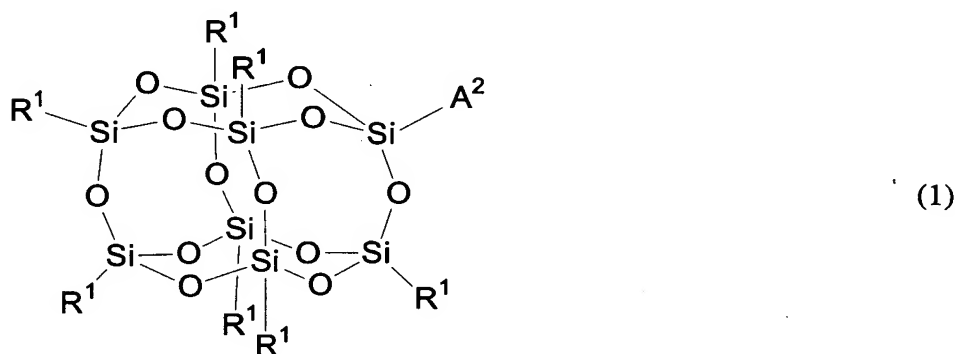
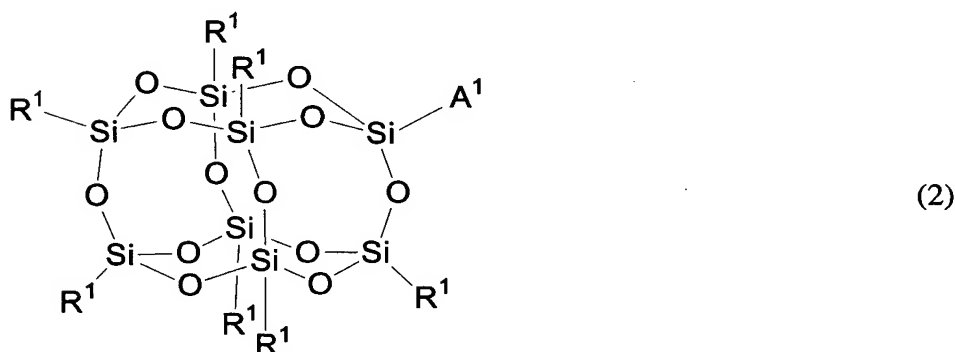


What is claimed is:

1. A production process for a silicon compound represented by formula (1), characterized by using a silicon compound represented by formula (2), wherein:



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- in formula (1), each of seven R¹ is a functional group independently selected from the group consisting of (a) hydrogen, (b) alkyl wherein each hydrogen may be optionally substituted with fluorine and each -CH₂- group may be optionally replaced with -O-, -CH=CH-, cycloalkylene or cycloalkenylene, (c) substituted or unsubstituted aryl, and (d) substituted or unsubstituted arylalkyl wherein each hydrogen of the alkylene group may be optionally substituted with fluorine and each -CH₂- group of said alkylene may be optionally replaced with -O- or -CH=CH-; and A² is a hydroxyl-
- 10

terminal organic functional group, and in formula (2), each of R^1 is the same as R^1 in formula (1), and A^1 is an organic functional group containing an acyloxy group.

2. The production process according to Claim 1, wherein each of seven R^1 in formula (1) is independently selected from the group consisting of: hydrogen; C_1 - C_{45} alkyl wherein each hydrogen may be optionally substituted with fluorine and each $-CH_2-$ group may be optionally replaced with $-O-$, $-CH=CH-$, cycloalkylene, or cycloalkenylene; substituted or unsubstituted aryl; and substituted or unsubstituted arylalkyl wherein each hydrogen of the alkylene is optionally substituted with fluorine and each $-CH_2-$ group of said alkylene may be optionally replaced with $-O-$ or $-CH=CH-$.
3. The production process according to Claim 1, wherein each of seven R^1 in formula (1) is independently selected from the group consisting of: hydrogen; and C_1 - C_{30} alkyl wherein each hydrogen may be optionally substituted with fluorine, and each $-CH_2-$ group may be optionally replaced with $-O-$ or cycloalkylene.
4. The production process according to Claim 1, wherein each of seven R^1 in formula (1) is independently selected from the group consisting of: C_1 - C_{20} alkenyl wherein each hydrogen may be optionally substituted with fluorine and each $-CH_2-$ group may be optionally replaced with $-O-$ or cycloalkylene; and C_1 - C_{20} alkyl wherein each $-CH_2-$ group is optionally replaced with cycloalkenylene and in the $-CH_2-$ group optionally replaced with cycloalkylene, each hydrogen may be optionally substituted with fluorine.
5. The production process according to Claim 1, wherein each of seven R^1 in formula (1) is independently selected from the group consisting of: naphthyl; and phenyl wherein each hydrogen may be optionally substituted with halogen or C_1 - C_{10} alkyl where each hydrogen may be optionally substituted with fluorine and each $-CH_2-$

group may be optionally replaced with $-O-$, $-CH=CH-$, cycloalkylene or phenylene.

6. The production process according to Claim 1, wherein each of seven R^1 in formula (1) is independently selected from the group consisting of phenylalkyls: wherein each hydrogen atom in a benzene ring may be optionally substituted with
5 halogen or C_1-C_{12} alkyl where each hydrogen may be optionally substituted with fluorine and each $-CH_2-$ group may be optionally replaced with $-O-$, $-CH=CH-$, cycloalkylene or phenylene, and in the alkylene of the phenylalkyl, the number of carbons of the alkylene group is 1 to 12; each hydrogen of said alkylene group may be optionally substituted with fluorine; and each $-CH_2-$ group of said alkylene group may
10 be optionally replaced with $-O-$ or $-CH=CH-$.

7. The production process according to Claim 1, wherein each of seven R^1 in formula (1) is independently selected from the group consisting of: C_1-C_8 alkyl wherein each hydrogen may be optionally substituted with fluorine and each $-CH_2-$ group may be optionally replaced with $-O-$, $-CH=CH-$, cycloalkylene or cycloalkenylene; phenyl
15 wherein each hydrogen may be optionally substituted with halogen, methyl or methoxy; unsubstituted naphthyl; and phenylalkyl wherein (a) each phenyl hydrogen may be optionally substituted with fluorine, C_1-C_4 alkyl, ethenyl or methoxy, (b) the number of carbons of the alkylene is 1 to 8, and each $-CH_2-$ group of said alkylene may be optionally replaced with $-O-$ or $-CH=CH-$.

8. The production process according to Claim 1, wherein all of seven R^1 in formula (1) are the same functional groups selected from the group consisting of: C_1-C_8 alkyl wherein each hydrogen may be optionally substituted with fluorine and each $-CH_2-$ group may be optionally replaced with $-O-$, $-CH=CH-$, cycloalkylene or
cycloalkenylene; phenyl wherein each hydrogen may be optionally substituted with
20 halogen, methyl or methoxy; unsubstituted naphthyl; and phenylalkyl wherein (a) each
25

phenyl hydrogen may be optionally substituted with fluorine, C₁-C₄ alkyl, ethenyl or methoxy, (b) the number of carbons of the alkylene is 1 to 8, and each -CH₂- group of said alkylene may be optionally replaced with -O- or -CH=CH-.

9. The production process according to Claim 1, wherein all of seven R¹ in formula (1) are the same functional groups selected from C₁-C₈ alkyls wherein each hydrogen may be optionally substituted with fluorine and each -CH₂- group may be optionally replaced with -O-, -CH=CH-, cycloalkylene, or cycloalkenylene.
10. The production process according to Claim 1, wherein all of seven R¹ in formula (1) are the same functional groups selected from the group consisting of: phenyl wherein each hydrogen may be optionally substituted with halogen, methyl or methoxy; naphthyl; and phenylalkyl wherein (a) each hydrogen of the phenyl may be substituted with fluorine, C₁-C₄ alkyl, ethenyl or methoxy, (b) the number of carbons of the alkylene group is 1 to 8, and each -CH₂- group of said alkylene may be optionally replaced with -O-.
11. The production process according to Claim 1, wherein A² in formula (1) is a group represented by formula (3), and A¹ in formula (2) is a group represented by formula (4),



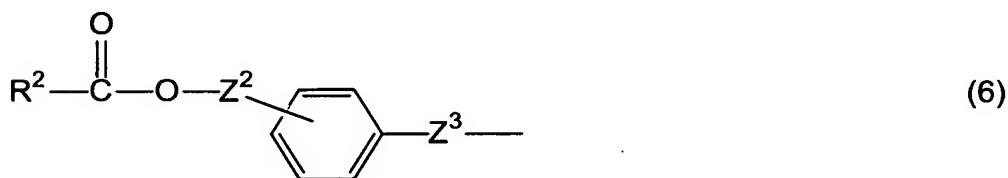
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wherein:

in formula (3), Z¹ is (a) C₁-C₂₂ alkylene where each -CH₂- may be optionally

replaced with $-O-$, or (b) C_3-C_8 alkenylene where each $-CH_2-$ may be optionally replaced with $-O-$; and in formula (4), R^2 is selected from the group of C_1-C_{17} alkyl where each hydrogen may be optionally substituted with fluorine, C_2-C_3 alkenyl, substituted or unsubstituted phenyl and unsubstituted phenylalkyl.

- 5 12. The production process according to Claim 1, wherein A^2 in formula (1) is a group represented by formula (5), and A^1 in formula (2) is a group represented by formula (6),



10 wherein:

in formula (5), (a) Z^2 represents a single bond or C_1-C_3 alkylene and may be bound to the benzene ring at any position, (b) Z^3 is (i) C_1-C_{22} alkylene where each $-CH_2-$ may be optionally replaced with $-O-$ or (ii) C_3-C_8 alkenylene where each $-CH_2-$ may be optionally replaced with $-O-$, and in formula (6), R^2 is selected from the group consisting of C_1-C_{17} alkyl, C_2-C_3 alkenyl, substituted or unsubstituted phenyl and unsubstituted phenylalkyl, and Z^2 and Z^3 are the same as Z^2 and Z^3 in formula (5).

13. The production process according to Claim 11, wherein: Z^1 in formula (3) is C_1-C_{22} alkylene where each $-CH_2-$ group may be optionally replaced with $-O-$; and R^2 in formula (4) is selected from the group consisting of C_1-C_{17} alkyl where each hydrogen may be optionally substituted with fluorine, and C_2-C_3 alkenyl where each $-CH_2-$ group

may be optionally replaced with -O- .

14. The production process according to Claim 11, wherein Z^1 in formula (3) is $\text{C}_1\text{-C}_6$ straight-chain alkylene where each $\text{-CH}_2\text{-}$ group may be optionally replaced with -O- ; and R^2 in formula (4) is methyl.

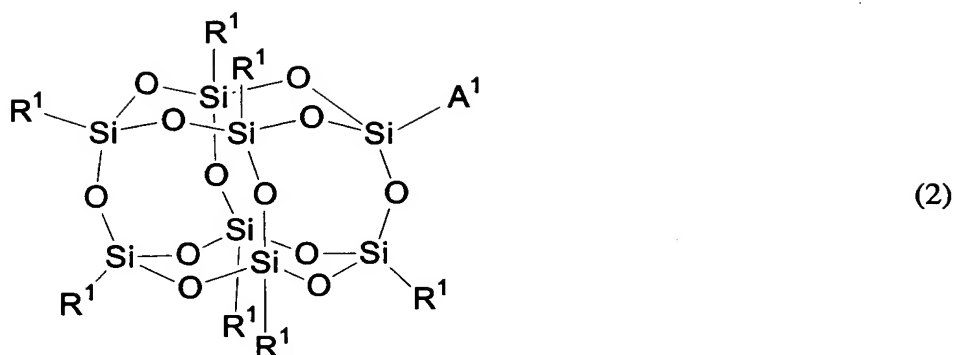
5 15. The production process according to Claim 12, wherein Z^2 in formula (5) represents a single bond or $\text{C}_1\text{-C}_3$ alkylene where each $\text{-CH}_2\text{-}$ group may be optionally replaced with -O- , and Z^3 is $\text{C}_1\text{-C}_{22}$ alkylene where each $\text{-CH}_2\text{-}$ group may be optionally replaced with -O- and may be bound to the benzene ring at any carbon position; and R^2 in formula (6) is selected from the group consisting of (a) $\text{C}_1\text{-C}_{17}$ alkyl
10 where each hydrogen may be optionally substituted with fluorine and each $\text{-CH}_2\text{-}$ group may be optionally replaced with -O- , and (b) $\text{C}_2\text{-C}_3$ alkenyl where each $\text{-CH}_2\text{-}$ group may be optionally replaced by -O- .

16. The production process according to Claim 12, wherein Z^2 in formula (5) represents a single bond or $\text{-CH}_2\text{-}$, Z^3 in formula (5) is $\text{-C}_2\text{H}_4\text{-}$, and R^2 in formula (6) is
15 methyl.

17. The production process according to Claim 1, wherein all of seven R^1 in formula (1) are the same groups selected from the group consisting of ethyl, 2-methylpropyl, 2,4,4-trimethylpentyl, cyclopentyl, cyclohexyl, trifluoropropyl, tridecafluoro-1,1,2,2-tetrahydrooctyl, and unsubstituted phenyl.

20 18. The production process according to Claim 1, wherein all of seven R^1 in formula (1) are either unsubstituted phenyl or trifluoropropyl.

19. A silicon compound represented by formula (2),



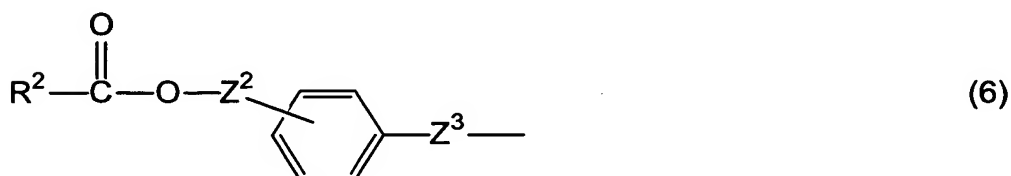
- wherein: in formula (2), each of seven R¹ is independently selected from the group consisting of (a) hydrogen, (b) alkyl where each hydrogen may be optionally substituted with fluorine and each -CH₂- group may be optionally replaced with -O-, -CH=CH-, cycloalkylene or cycloalkenylene, (c) substituted or unsubstituted aryl, and (d) substituted or unsubstituted arylalkyl where each hydrogen of the alkylene may be optionally substituted with fluorine and each -CH₂- group of said alkylene may be optionally replaced with -O- or -CH=CH-; and A¹ is an organic group that has an acyloxy group.
20. The silicon compound according to Claim 19, wherein A¹ in formula (2) is a group represented by formula (4),



- wherein: in formula (4), R² is selected from the group consisting of (a) C₁-C₁₇ alkyl where each hydrogen may be optionally substituted with fluorine, (b) C₂-C₃ alkenyl, (c) substituted or unsubstituted phenyl and (d) unsubstituted phenylalkyl; and Z¹ is either C₁-C₂₂ alkylene where each -CH₂- group may be optionally replaced with -

O-, or C₃-C₈ alkenylene where each -CH₂- group may be optionally replaced by -O-.

21. The silicon compound according to Claim 19, wherein A¹ in formula (2) is a group represented by formula (6),



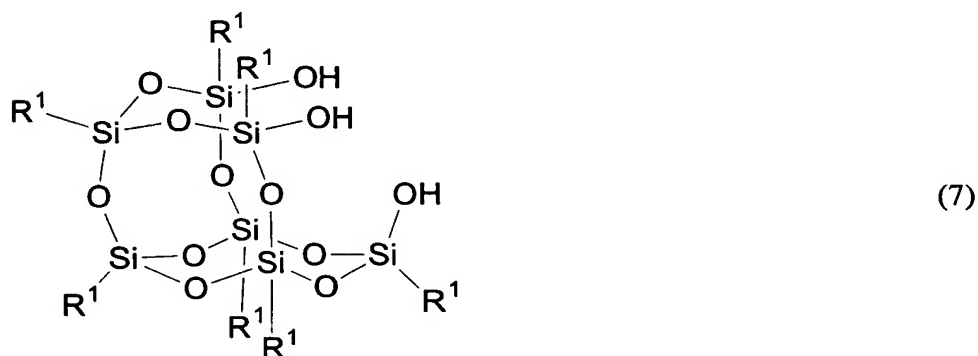
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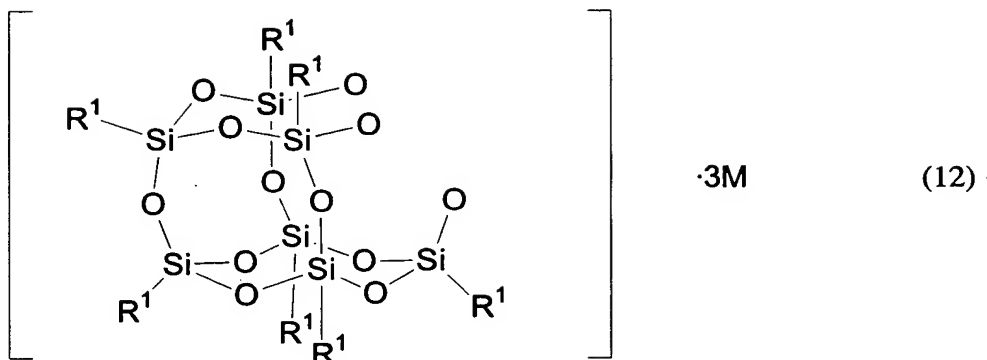
wherein: in formula (6), R² is selected from the group consisting of C₁-C₁₇ alkyl; C₂-C₃ alkenyl; substituted or unsubstituted phenyl and unsubstituted phenylalkyl; and Z² represents a single bond or C₁-C₃ alkylene that may be bound to the benzene ring at any carbon position; and Z³ is either C₁-C₂₂ alkylene where each -CH₂- group may be optionally replaced with -O-, or C₃-C₈ alkenylene where each -CH₂- may be optionally replaced by -O-.

10

22. The production process according to Claim 1, characterized by providing a silicon compound represented by formula (2) through reacting a trichlorosilane compound having an acyloxy group with either (a) a compound represented by formula (7) or (b) a compound represented by formula (12) and acid-catalyzed transesterificating in alcohol,

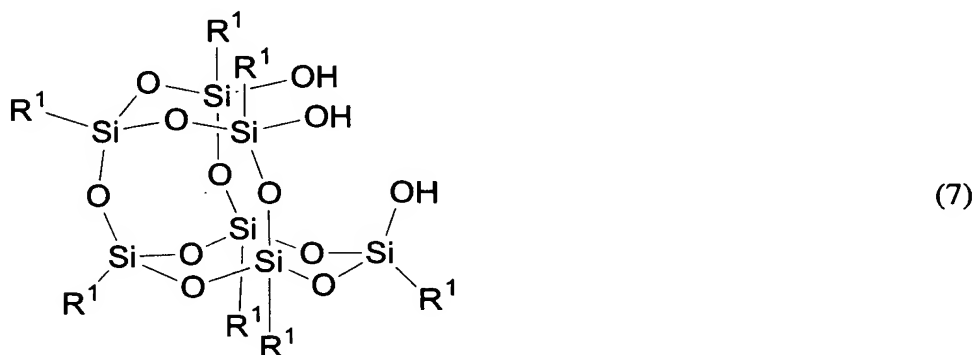
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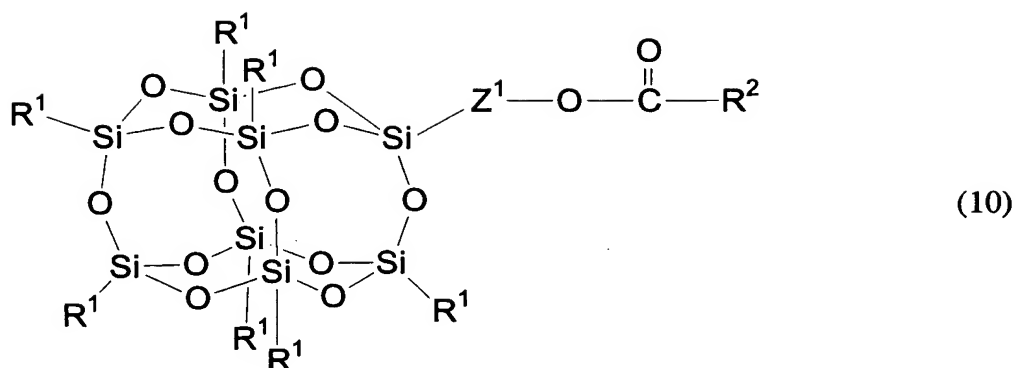
wherein: in formulas (7) and (12), R^1 is the same as R^1 in formula (1) and M is a monovalent alkali metal atom.

23. The production process according to Claim 11, characterized by providing a silicon compound represented by formula (10) through reacting a compound represented by formula (8) with a compound represented by formula (7) and acid-catalyzed transesterificating in alcohol,



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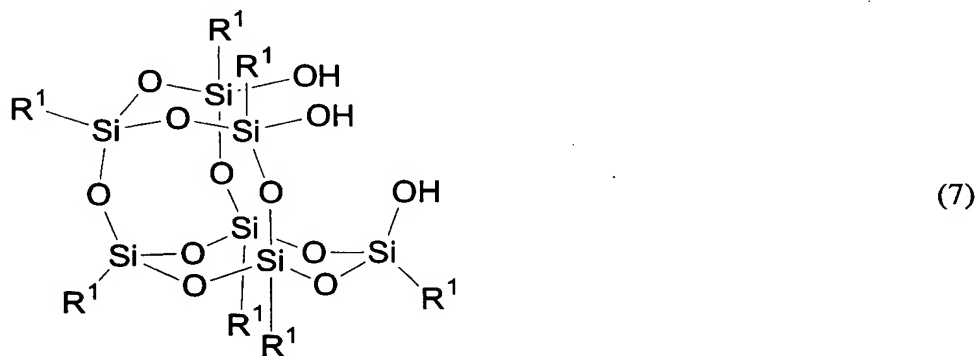


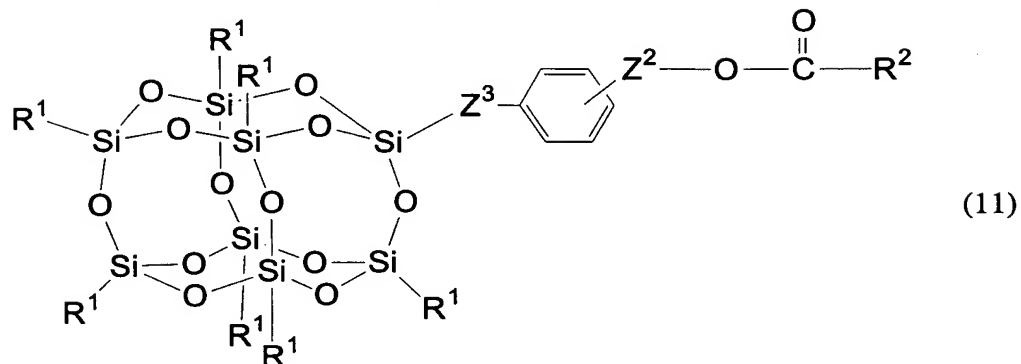
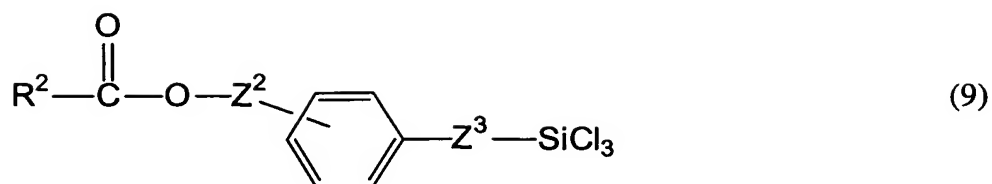


wherein: in formula (7), R¹ is the same as R¹ in formula (1) as described in Claim 1, in formula (8), R² and Z¹ are the same as R² and Z¹ in formula (4) as described in Claim 11, and in formula (10), R¹, R² and Z¹ are the same as R¹, R² and Z¹ in formulas (7) and (8).

24. The production process according to Claim 12, characterized by providing a silicon compound represented by formula (11) through reacting a compound represented by formula (9) with a compound represented by formula (7) and acid-catalyzed transesterificating in alcohol,

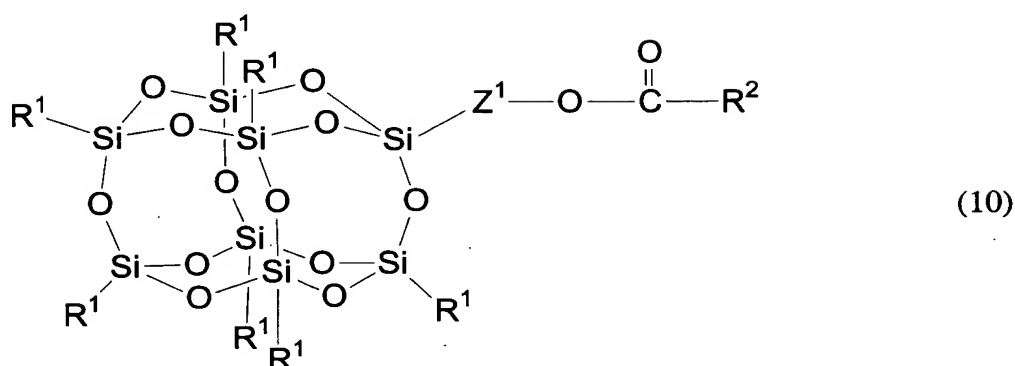
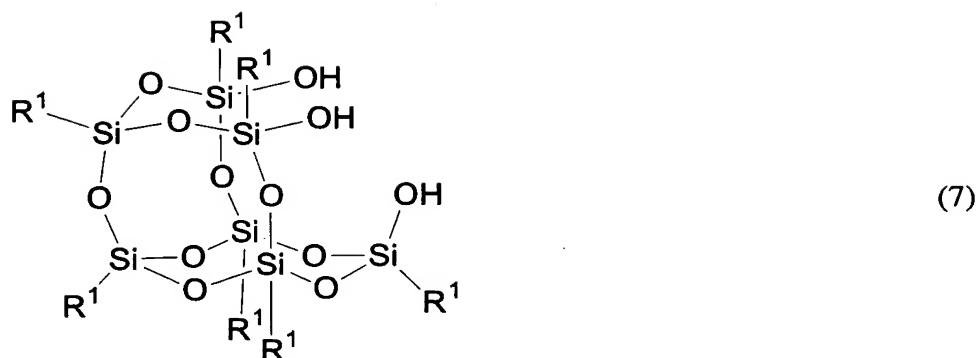
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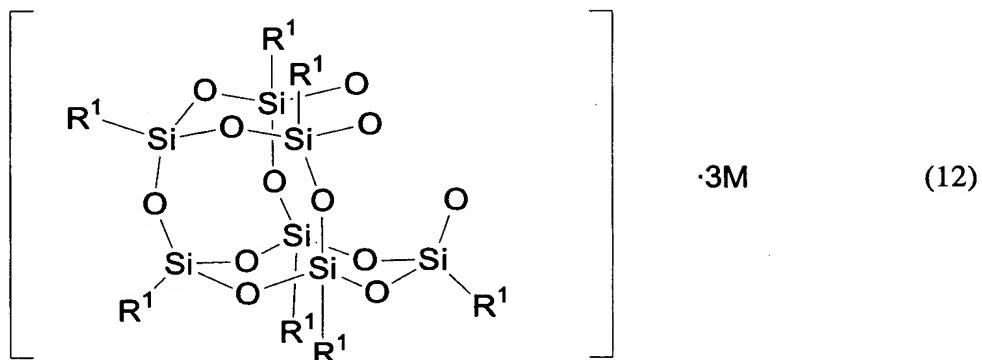
wherein: in formula (7), R¹ is the same as R¹ in formula (1) as described in Claim 1, in formula (9), R², Z², and the binding position thereof to the benzene ring are the same as R², Z², and the binding position thereof to the benzene ring in formula (6) as described in Claim 12, and in formula (11), the characters and the binding position thereof to the benzene ring are the same as the characters and the binding position thereof to the benzene ring in formulas (7) and (9).

25. The production process according to Claim 11, characterized by providing a
10 silicon compound represented by formula (10) through reacting a compound represented
by formula (8) with a compound represented by formula (7) and acid-catalyzed
transesterificating in alcohol,

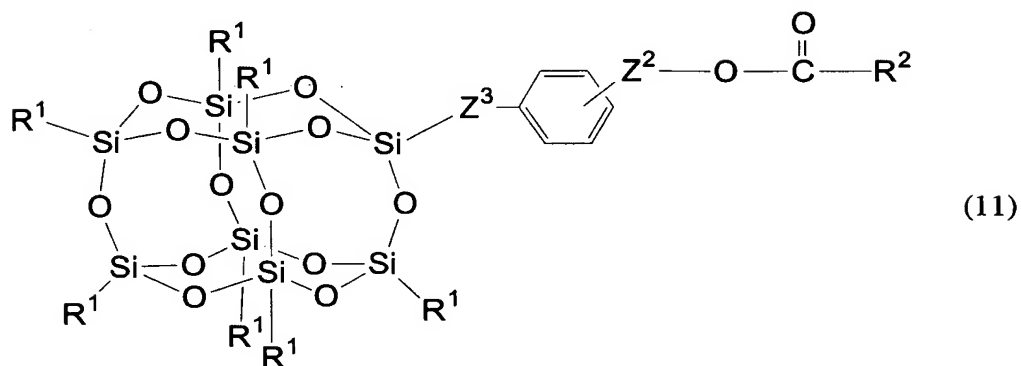
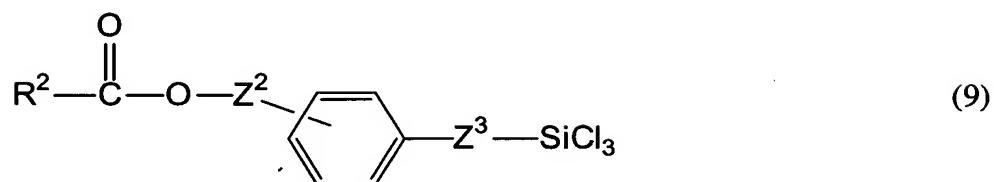
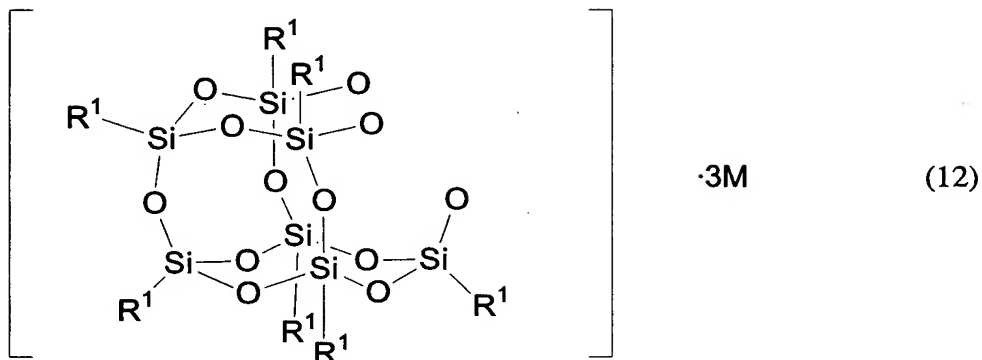


- wherein: in formula (7), all of seven R¹ are the same functional groups selected
- 5 from the group consisting of ethyl, 2-methylpropyl, 2,4,4-trimethylpentyl, cyclopentyl, cyclohexyl, trifluoropropyl, tridecafluoro-1,1,2,2-tetrahydrooctyl and unsubstituted phenyl, in formula (8), R² and Z¹ are the same as R² and Z¹ in formula (4) as described in Claim 11, and in formula (10), R¹, R² and Z¹ are the same as R¹, R² and Z¹ in formula (7) and (8).
- 10 26. The production process according to Claim 11, characterized by providing a silicon compound represented by formula (10) through reacting a compound represented by formula (8) with a compound represented by formula (12) and acid-catalyzed

transesterificating in alcohol,



transesterificating in alcohol,

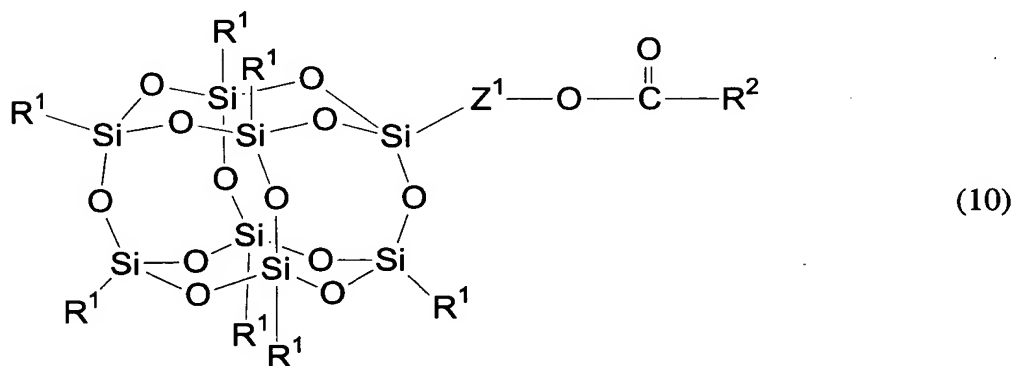
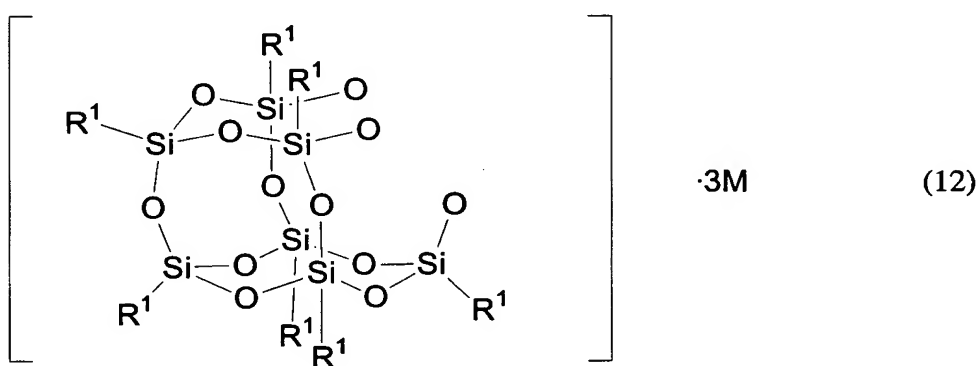


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wherein: in formula (12), R¹ is the same as R¹ in formula (1) as described in Claim 1 and M is a monovalent alkali metal atom, in formula (9), R², Z², Z³, and the binding position thereof to the benzene ring are the same as R², Z², Z³, and the binding position thereof to the benzene ring in formula (6) as described in Claim 12, and in
10 formula (11), the characters and the binding position thereof to the benzene ring are the

same as the characters and the binding position thereof to the benzene ring in formulas (12) and (9).

28. The production process according to Claim 11, characterized by providing a silicon compound represented by formula (10) through reacting a compound represented by formula (8) with a compound represented by formula (12) and acid-catalyzed transesterificating in alcohol,

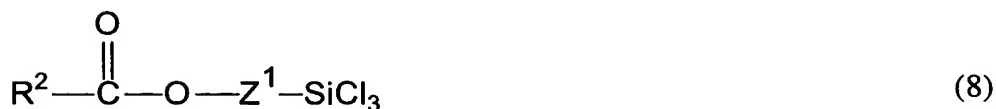
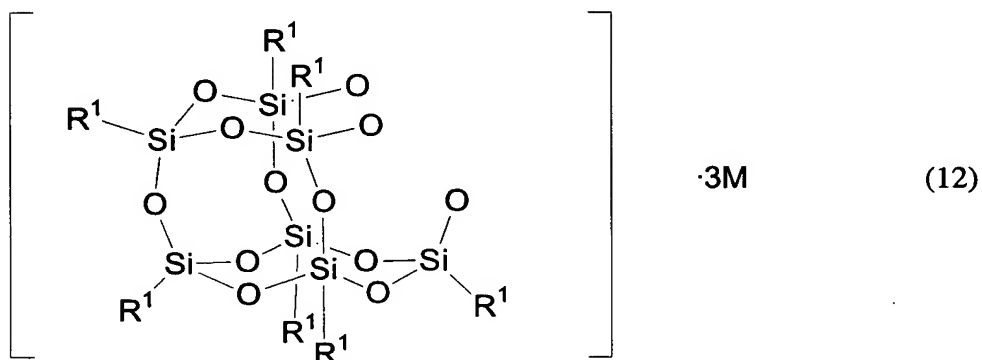


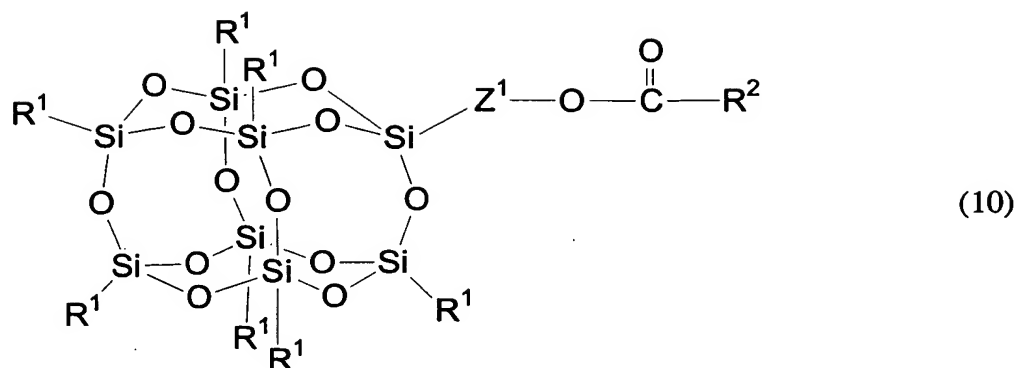
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wherein: in formula (12), all of seven R¹ are the same groups selected from the group consisting of (i) C₁-C₈ alkyl where each hydrogen may be optionally substituted

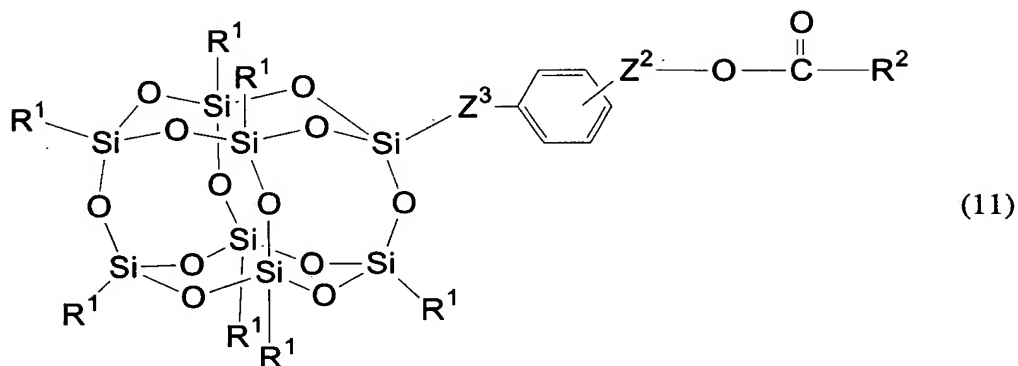
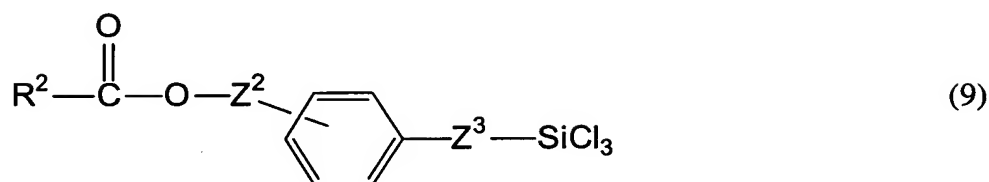
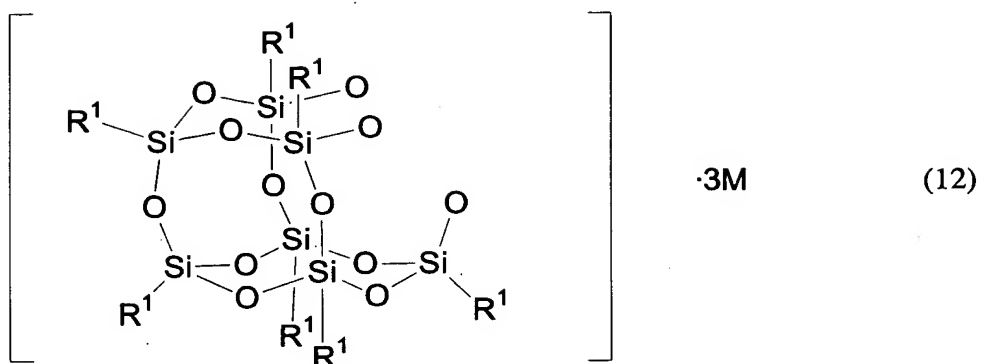
with fluorine and each $-\text{CH}_2-$ group may be optionally replaced with $-\text{O}-$, $-\text{CH}=\text{CH}-$, cycloalkylene or cycloalkenylene, (ii) phenyl where each hydrogen may be optionally substituted with halogen, methyl or methoxy, (iii) unsubstituted naphthyl and (iv) phenylalkyl where (A) each benzene hydrogen may be substituted with fluorine, C_1 - C_4 alkyl, ethenyl or methoxy, (B) each $-\text{CH}_2-$ group of the alkylene may be optionally replaced with $-\text{O}-$ or $-\text{CH}=\text{CH}-$, and M is a monovalent alkali metal atom, in formula (8), R^2 and Z^1 are the same as R^2 and Z^1 in formula (4) as described in Claim 11, and in formulas (12) and (8).

29. The production process according to Claim 11, characterized by providing a
10 silicon compound represented by formula (10) through reacting a compound represented
by formula (8) with a compound represented by formula (12) and acid-catalyzed
transesterificating in alcohol,





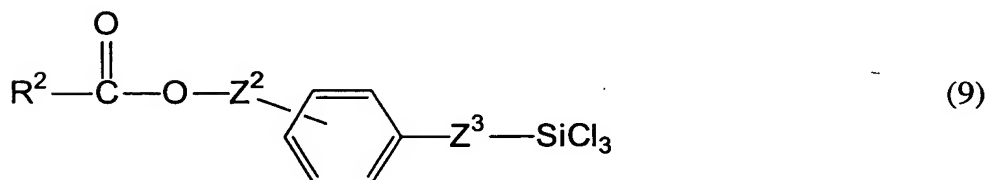
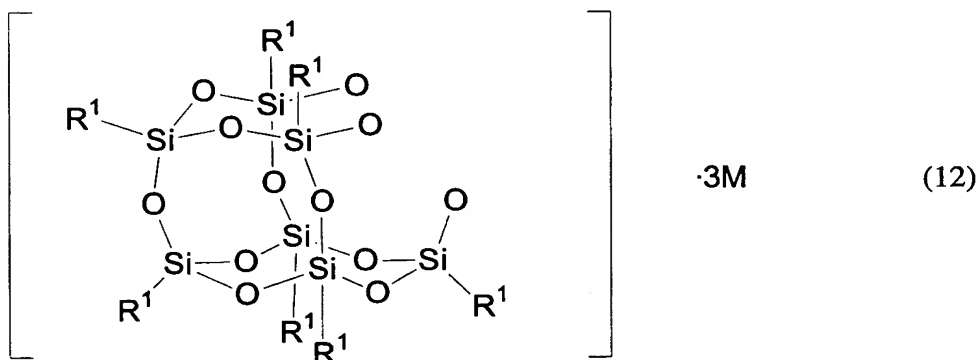
- wherein: in formula (12), all of seven R^1 are the same groups selected from the group consisting of (i) ethyl, (ii) 2- methylpropyl, (iii) 2,4,4,-trimethylpentyl, (iv) cyclopentyl, (v) cyclohexyl, (vi) trifluoropropyl, (vii) tridecafluoro-1,1,2,2-
- 5 tetrahydrooctyl, and (viii) unsubstituted phenyl, and M is a monovalent alkali metal atom, in formula (8), R^2 and Z^1 are the same as R^2 and Z^1 in formula (4) as described in Claim 11 of formula (10), R^1 , defined below through reaction of (a) a compound of formula (12), and in formula (10), R^1 , R^2 and Z^1 are the same as R^1 , R^2 and Z^1 in formulas (12) and (8).
- 10 30. The production process according to Claim 12, characterized by providing a silicon compound represented by formula (11) through reacting a compound represented by formula (9) with a compound represented by formula (12) and acid-catalyzed transesterificating in alcohol,

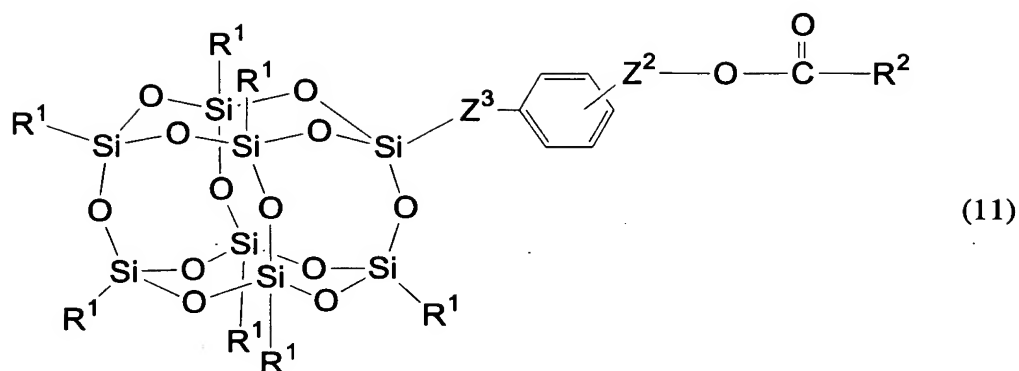


- 5 wherein: in formula (12), all of seven R¹ are the same groups selected from the group consisting of (i) C₁-C₈ alkyl wherein each hydrogen may be optionally substituted with fluorine and each -CH₂- group may be optionally replaced with -O-, -CH=CH-, cycloalkylene or cycloalkenylene, (ii) phenyl wherein each hydrogen may be optionally substituted with halogen, methyl or methoxy, (iii) unsubstituted naphthyl and (iv)
- 10 phenylalkyl wherein each benzene hydrogen is optionally substituted with fluorine, C₁-C₄ alkyl, ethenyl or methoxy and each -CH₂- group of the alkylene may be optionally

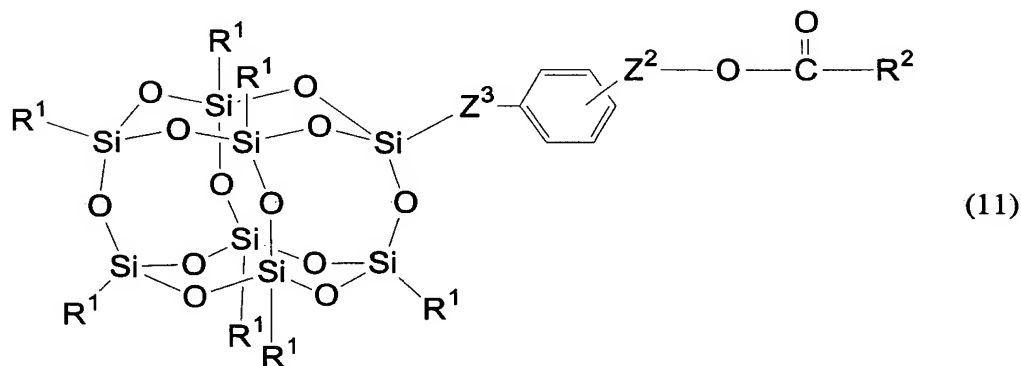
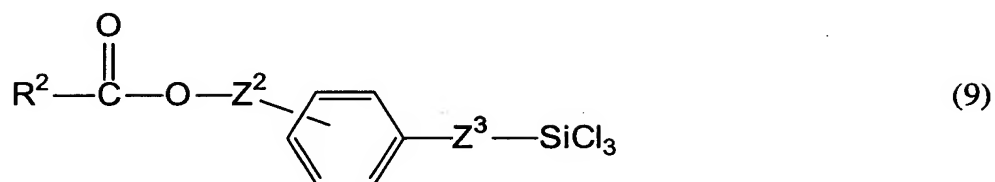
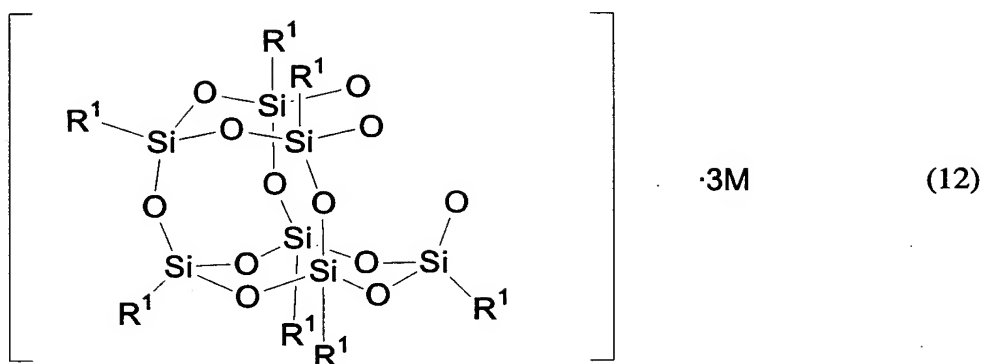
replaced with $-\text{O}-$ or $-\text{CH}=\text{CH}-$, and M is a monovalent alkali metal atom, in formula (9), R^2 , Z^2 , Z^3 , and the binding position thereof to the benzene ring and are the same as R^2 , Z^2 , Z^3 , and the binding position thereof to the benzene ring in formula (6) as described in Claim 12, and in formula (11), the characters and the binding position thereof to the benzene ring are the same as the characters and the binding position thereof to the benzene ring in formulas (12) and (9).

31. The production process according to Claim 12, characterized by providing a silicon compound represented by formula (11) through reacting a compound represented by formula (9) with a compound represented by formula (12) and acid-catalyzed transesterificating in alcohol,





- wherein: in formula (12), all of seven R^1 are the same groups selected from the group consisting of (i) ethyl, (ii) 2-methylpropyl, (iii) 2,4,4-trimethylpentyl, (iv) cyclopentyl, (v) cyclohexyl, (vi) trifluoropropyl, (vii) tridecafluoro-1,1,2,2-
- 5 tetrahydrooctyl and (viii) unsubstituted phenyl, and M is a monovalent alkali metal atom, in formula (9), R^2 , Z^2 , Z^3 , and the binding position thereof to the benzene ring are the same as R^2 , Z^2 , Z^3 , and the binding position thereof to the benzene ring in formula (6) as described in Claim 12,
- and in formula (11), the characters and the binding position thereof to the benzene ring
- 10 are the same as the characters and the binding position thereof to the benzene ring in formulas (12) and (9).
32. The production process according to Claim 12, characterized by providing a silicon compound represented by formula (11) through reacting a compound represented by formula (9) with a compound represented by formula (12) and acid-catalyzed
- 15 transesterificating in alcohol,

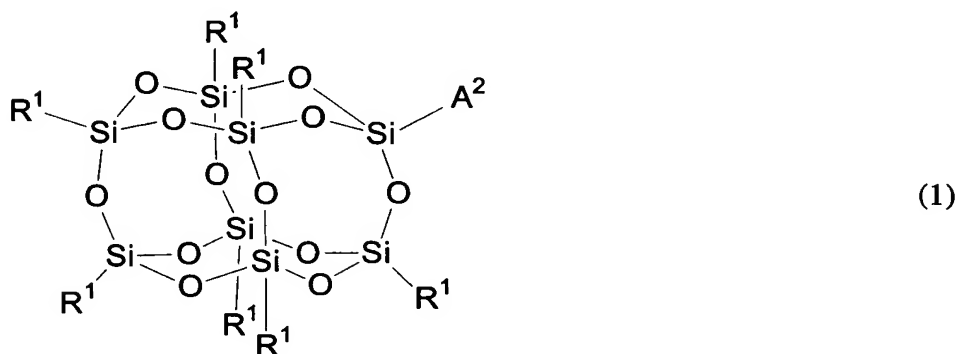


5 wherein: in formula (12), all of seven R^1 are either unsubstituted phenyl or trifluoropropyl and M is a monovalent alkali metal atom, in formula (9), R^2 , Z^2 , Z^3 , and the binding position thereof to the benzene ring are the same as R^2 , Z^2 , Z^3 , and the binding position thereof to the benzene ring in formula (6) as described in Claim 12, and in

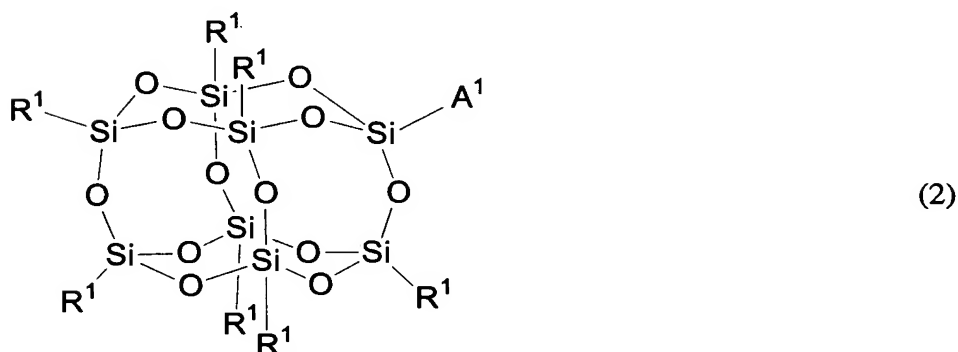
10 formula (11), the characters and the binding position thereof to the benzene ring are the same as the characters and the binding position thereof to the benzene ring

in formulas (12) and (9).

33. A silicon compound represented by formula (1), being prepared from a silicon compound represented by formula (2),



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wherein: in formula (1), each of seven R¹ is independently selected from the group consisting of (a) hydrogen, (b) C₁-C₄₅ alkyl wherein each hydrogen may be optionally substituted with fluorine and each -CH₂- group may be optionally replaced with -O-, -CH=CH-, cycloalkylene or cycloalkenylene, (c) substituted or unsubstituted aryl and (d) substituted or unsubstituted arylalkyl wherein each hydrogen of the alkenylene may be optionally substituted with fluorine and each -CH₂- group of said alkenylene may be optionally replaced with -O- or -CH=CH-; and A² is a hydroxyl-

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terminal organic group, and in formula (2), R^1 is the same as R^1 in formula (1) and A^1 is an organic compound having an acyloxy group.

34. The silicon compound according to Claim 33, (a) in formula (1), all of seven R^1 are the same functional groups selected from the group consisting of (i) ethyl, (ii) 2-methylpropyl, (iii) 2,4,4-trimethylpentyl, (iv) cyclopentyl, (v) cyclohexyl, (vi) trifluoropropyl, (vii) tridecafluoro-1,1,2,2-tetrahydrooctyl and (viii) unsubstituted phenyl; (b) A^2 is a group represented by formula (3) and (c) A^1 in formula (2) is a group represented by formula (4),



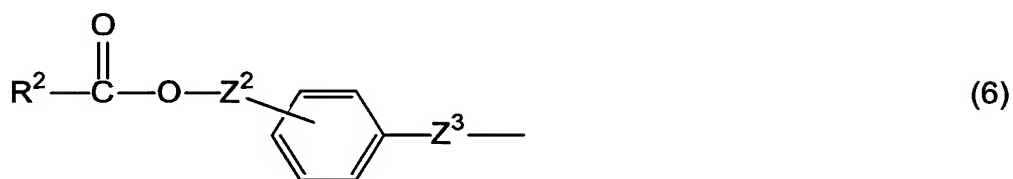
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wherein: in formula (3), Z^1 is either C_1 - C_{22} alkylene where each $-CH_2-$ group may be optionally replaced with $-O-$, or C_3 - C_8 alkenylene where each $-CH_2-$ group may be optionally replaced with $-O-$; in formula (4), R^2 is selected from the group consisting of C_1 - C_{17} alkyl where each hydrogen may be optionally substituted with fluorine, C_2 - C_3 alkenyl, substituted or unsubstituted phenyl and unsubstituted phenylalkyl, and Z^1 is the same as Z^1 in formula (3).

35. The silicon compound according to Claim 33, (a) in formula (1), all of seven R^1 are the same functional groups selected from the group consisting of (i) ethyl, (ii) 2-methylpropyl, (iii) 2,4,4-trimethylpentyl, (iv) cyclopentyl, (v) cyclohexyl, (vi) trifluoropropyl, (vii) tridecafluoro-1,1,2,2-tetrahydrooctyl and (viii) unsubstituted phenyl; (b) A^2 is a group represented by formula (5) and (c) A^1 in formula (2) is a group

represented by formula (6),

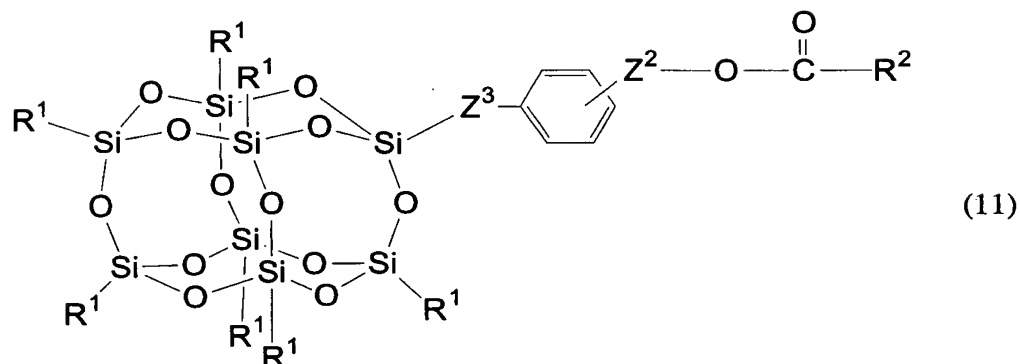
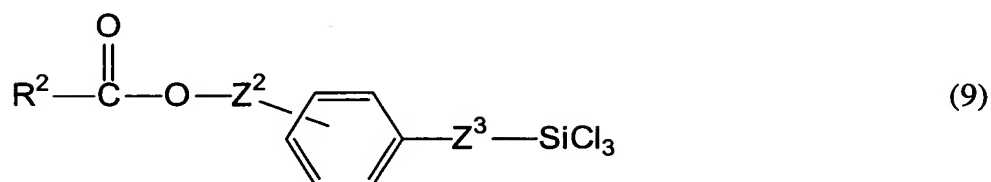
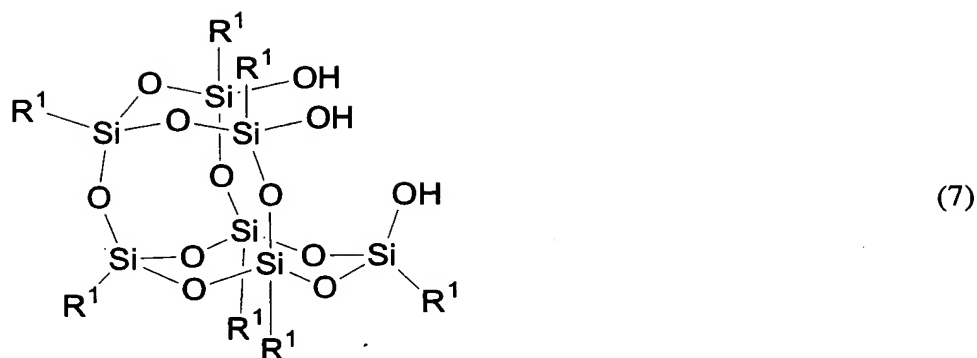


5 wherein: in formula (5), (A) Z^2 represents a single bond or $\text{C}_1\text{-C}_3$ alkylene and may be bound to the benzene ring at any carbon position, (B) Z^3 is either $\text{C}_1\text{-C}_{22}$ alkylene where each $-\text{CH}_2-$ may be optionally replaced with $-\text{O}-$, or $\text{C}_3\text{-C}_8$ alkenylene where each $-\text{CH}_2-$ may be optionally replaced with $-\text{O}-$, in formula (6), R^2 is selected from the group consisting of $\text{C}_1\text{-C}_{17}$ alkyl, $\text{C}_2\text{-C}_3$ alkenyl, substituted or unsubstituted
10 phenyl and unsubstituted phenylalkyl, and Z^2 and Z^3 are the same as Z^2 and Z^3 in formula (5).

36. The silicon compound according to Claim 34, wherein all of seven R^1 are either unsubstituted phenyl or trifluoropropyl.

37. The silicon compound according to Claim 35, wherein all of seven R^1 are either
15 unsubstituted phenyl or trifluoropropyl.

38. The production process according to Claim 12, characterized by providing a silicon compound represented by formula (11) through reacting a compound represented by formula (9) with a compound represented by formula (7) and acid-catalyzed transesterificating in alcohol,



5 wherein: in formula (7), all of seven R¹ are the same group selected from the group consisting of (i) ethyl, (ii) 2-methylpropyl, (iii) 2,4,4-trimethylpentyl, (iv) cyclopentyl, (v) cyclohexyl, (vi) trifluoropropyl, (vii) tridecafluoro-1,1,2,2-tetrahydrooctyl and (viii) unsubstituted phenyl, in formula (9), R², Z², Z³, and the binding position thereof to the benzene ring are the same as R², Z², Z³, and the binding position thereof to the benzene ring in formula (6) as described in Claim 12, and in formula (11), the characters and the

10 binding position thereof to the benzene ring are the same as the characters and the

binding position thereof to the benzene ring in formulas (7) and (9).